**Severe acute respiratory disease caused by pandemic influenza A H1N1 virus. A case series of hospitalized patients in Southeastern Brazil during the 2009 epidemic**

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*Background:* During the pandemic influenza A H1N1 (FluAH1N1) period in 2009, it was observed a significant number of suspected cases presenting severe acute respiratory disease (SARD). In this context, all health care settings have adapted their structure — including infection control strategies, emergency and intensive care unities organization, treatment protocols — to increase their capacity of pandemic response. The main objective of this study is to describe the main clinical and epidemiological features of a case serie of severe acute respiratory disease caused by pandemic FluAH1n1 in a metropolitan region.

*Methods:* Retrospective and descriptive study based on information of medical records and epidemiological files of SARD hospitalized cases caused FluAH1N1 in 5 hospitals in the metropolitan region of Campinas, São Paulo State, during the first epidemic period in Brazil.

*Results:* Between July/6 and October/30 there were evaluated 254 cases of SARD; of them, 49 have been confirmed as FluAH1N1 infection (19.3%) and 14 (5,5%) as seasonal influenza strain. Of the 49 confirmed FluAH1N1 cases, 28 were female (57.1%) and the median age was 26 years (range: 0-75 years). The median time from onset of illness and hospital admission was 2 days (range, 1 to 5). Nine cases (18.3%) were admitted in intensive care unity and 5 (10.2%) required mechanical ventilation. The most important clinical features were fever and cough(98%), dyspnoea (77.5%), and malaise (83.6%). X-ray abnormalities were present in 75.5% of patients; leucocytes count was elevated in 5 (10.2%) and reduced in 6 (12.2%) patients. Pre-existing conditions were observed in 28 patients (55.1%); chronic respiratory disease (51.8%) and obesity (22.2%) were the most frequent underlying medical conditions. There were 4 deaths associated with FluAH1N1 (lethality 8.1%), one of them with simultaneous seasonal influenza strain virus infection.

*Conclusion:* As observed in other case series, it has been observed a higher frequency of SARD in female gender, younger adults, and in patients with underlying medical consonal influenza on morbidity and mortality annually and the importance of a continuous epidemiological and laboratorial surveillance of respiratory syndromes.

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**28.051**

**Is the 2009 influenza A (H1N1) virus uncovering health disparities in Miami?**

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*Background:* Since last April 2009 when the first cases of 2009 H1N1 influenza were diagnosed in the United States, the Miami-Dade County has been the hardest hit by this disease among Florida counties. This outbreak has also uncovered large disparities in the outcome of this disease among ethnic and racial groups in our community. Sixty-two percent of the 2,400,000 Miami-Dade County residents are of Hispanic origin, eighteen percent are Black Non-Hispanic, and White Non-Hispanic respectively. Among County residents, twentyeight percent have no health insurance, and seventeen percent live below the poverty level.

*Methods:* Information was retrieved from the enhanced public health surveillance database of Miami-Dade County residents who were hospitalized or died due to laboratory-confirmed 2009 H1N1 influenza infection reported to the Miami-Dade County Health Department between April 26th and November 30th, 2009.

*Results:* During this period, a total of 32 patients died, and 423 were admitted at Miami-Dade hospitals due to this disease. The hospitalization rate among Black Non-Hispanic residents (26.7 per 100,000) was more than three times higher than the one observed among White Non-Hispanics (7.3 per 100,000). Black Non-Hispanic residents (1.9 per 100,000) were more than twice likely to die due to this disease than Non-Hispanic Whites (0.7 per 100,000). Miami-Dade had more pronounced disparities among racial/ethnic groups than the ones observed in other areas of the State of Florida.

*Conclusion:* The current 2009 H1N1 influenza outbreak has hit more severely the minority population in Miami-Dade, underscoring the need to address the social and environmental factors leading to increasing health disparities observed on this community.

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**28.052**

**Comparative evaluation of ARDS patients with and without H1N1 infection at a tertiary care referral center**

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*Background:* The recent emergence of H1N1 as pandemic has raised concerns in its critical care management. The management in our ICU is primarily based on guidelines of sepsis and ARDS. So we compare our experience of Acute

lung Injury patients referred to our centre with and without H1N1 infection.

*Methods:* All patients admitted to our centre over a period of 3 months were studied. Patients with Acute lung Injury and ARDS and clinical suspicion of H1N1 were shifted to the ICU specifically assigned for management of such patients. The demographic profile, presenting features, outcome and parameters of oxygenation and ventilation were recorded and compared.

*Results:* The clinical features were comparable in the two groups — H1N1 and nonH1N1 group, at the time of presentation in our centre. A total of 40 patients were shifted to our ICU with the clinical suspicion of H1N1 infection and having respiratory compromise requiring ventilatory support. Out of these 26 patients were tested positive for H1N1 and rest were negative. The mean age was 32.8 and 31.8 years and male: female ratio of 16: 10 and 6:8 in patients with and without H1N1 infection respectively. 12 patients in H1N1 group and 3 patients in nonH1N1 group had associated comorbidities. The mean duration of symptom prior to need of ventilator support was 6.4 and 5.9 days respectively in the two groups. The mean PaO2 at the time of ICU admission was 48.6 and 52.7 mm Hg in the two groups respectively. The The H1N1 group had 100% mortality while it was 71.4% in nonH1N1 group. The mean duration of stay in ICU was 3.4 and 5.5 days respectively in two groups. The acute renal failure was seen in 8 patients in H1N1 group as compared to none in nonH1N1 group. 42% and 36% of the patients required inotropic support in the two groups respectively.

*Conclusion:* The H1N1 positive patients has more florid and severe course with high mortality as compared to nonH1N1 patients with similar demographic profile, initial clinical symptoms and respiratory compromise requiring ventilatory support.

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**28.053**

**Comparison between three not pharmacological strategies aimed to prevent the dissemination of the A/H1N1 influenza virus in Colombia**

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*Background:* Influenza by the new A H1N1/09 virus is an emerging disease characterized by high transmissibility, rapid capacity to spread, high pandemic potential and seriousness of its complications, particularly in population with risk factors already established. The countries have been preparing for the impact of mitigation in case of appearance of a new pandemic through the adoption of different strategies of which the social distancing is one of the most used strategies. Social distancing strategies have lasted in an arbitrary manner between 7 and 21 days, and have a potential impact on the spread of the epidemic virus and at the same time an economic impact on individuals, the productive sector or insurers, depending on the time of license and various forms of recruitment. In the literature there are different models that show the impact generated by this measure in different populations but not in our population.

*Methods:* Our study was a simulation of discret events with the Arena Professional Edition Software Version 11, starting from the existence of a first case infected with the virus, taking as susceptible population the total population of Bogota, to compare 3 strategies of social distancing in workers with wages: 1. Only hygiene measures in the work site (washing hands and mask); 2. Unable to work for 3 days; and 3. Unable to work for 7 days. We calculated the costs of productivity lost with each of the strategies through the approach of human capital.

*Results:* The most cost-effective strategy for our population was to give incapacity during three days. For this strategy we calculated a total of 1,862,331 of infected patients and a mortality rate of 1.0%, the lost of productivity calculated was 6 days, and the cost was 155 dollars patient.

*Conclusion:* The strategy of social distancing more cost-effective in preventing the spread of the virus influenza A H1N1 in the Colombian population is unable to work for 3 days.

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## Malaria & Blood-borne Parasites (Poster Presentation)

**29.001**

**A study of acute myocardial infarction in a hospital cohort of malaria: 4 years retrospective analysis**

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*Background*: Malaria, a protozoal disease, caused by genus plasmodium, is prevalent in about 100 countries worldwide & is a major cause of morbidity & mortality especially in sub Saharan Africa, Southeast Asia & Latin-America. Myocardial infarction has not been recognized as a complication of malaria though there have been reports of myocardial involvement in experimental studies and in post-mortem findings. The objective of the present study was to analyze the association of acute myocardial infarction (AMI) in malaria patients

*Methods*: Retrospective observational study of 38,919 in-patients of Dr. TMA Pai Rotary Hospital was done from the year 1995 to 1998. Analysis had been started from 1995 as malaria resurged in Mangalore city from 1995 onwards. A year wise categorizations of patients were done & occurrence of AMI among patients with malaria was compared with the occurrence of AMI among all other in-patients for each year & cumulatively. Diagnosis of malaria cases had been established by QBC test. Diagnosis of myocardial infarction had been established by following standard ECG changes and cardiac biomarkers profile. After tabulation, p value has determined by applying standard Gaussian test. p value $<0.05$ was considered to be significant.